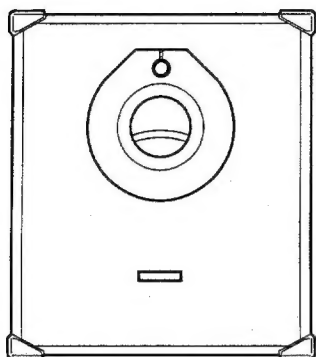


# aiwa



## TS-W45



ACTIVE SPEAKER SYSTEM

• TYPE : U, EZ, HR

# SERVICE MANUAL

## SPECIFICATIONS

<b>Input terminals</b>	INPUT 1 jack INPUT 2 terminals	<b>Speaker unit</b>	20 cm (Magnetically shielded type)
<b>Input sensitivity/Impedance</b>	INPUT 1: 0.3 V / 50 kilo ohms (at 60 Hz) INPUT 2: 3 V / 4.4 kilo ohms (L and R) (at 60 Hz)	<b>Power requirement</b>	U: AC 120 V, 60 Hz EZ: AC 230 V, 50 Hz HR: AC 120 V / 220 V - 240 V switchable, 50 / 60 Hz
<b>Output terminals</b>	SPEAKERS OUT terminals	<b>Power consumption</b>	U: 40 W EZ, HR: 60 W
<b>Power output</b>	FTC RULE 50 watts, Min. RMS at 8 ohms, from 45 Hz to 150 Hz, with no more than 1 % Total Harmonic Distortion 50 W (8 ohms, T.H.D. 1 % at 60 Hz) 60 W (8 ohms, T.H.D. 10 % at 60 Hz)	<b>Dimensions</b>	385 x 325 x 345 mm (W/H/D)
<b>Frequency response</b>	35 Hz - 200 Hz	<b>Weight</b>	7.5 kg
<b>Speaker type</b>	Bass reflex type	• Design and specifications are subject to change without notice.	

## ACCESSORIES / PACKAGE LIST

If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

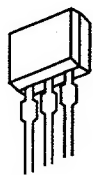
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	82-YP2-901-010		IB,H(ECA)D<HR>
1	82-YP2-906-010		IB,EZ(9L)D<EZ>
1	82-YP2-903-010		IB,U(ESF)DHM<U>
2	87-YP3-632-010		186-C13000,CORD ASSY
△ 3	87-099-789-010		PLUG,CONVERSION IR-44<HR>

# ELECTRICAL MAIN PARTS LIST

If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
TRANSISTOR				C406	87-010-385-080		CAP, ELECT 220-25V
	87-026-609-080		TR,KTA1266GR	C407	87-010-405-080		CAP, ELECT 10-50V
	87-026-610-080		TR,KTC3198GR	C408	87-010-405-080		CAP, ELECT 10-50V
	87-A30-215-010		TR,2SD2025	C409	87-010-405-080		CAP, ELECT 10-50V
	87-A30-214-010		TR,2SB1344	C410	87-010-404-080		CAP, ELECT 4.7-50V
	87-A30-087-080		C-FET,2SK2158	C411	87-010-405-080		CAP, ELECT 10-50V
	87-A30-091-080		FET,2SJ460	C412	87-010-405-080		CAP, ELECT 10-50V
	87-026-269-080		TR,DTA114ES	CN202	87-049-919-010		CONN,3P EH V WHT
DIODE				CN301	87-099-043-010		CONN 2P EH
	86-SP2-646-010		151-540235,DIODE IN5402LT	J401	87-099-801-010		JACK,PIN 1P BLK
	87-020-465-080		DIODE,1SS133 (110MA)	J402	86-SP2-641-110		TERMINAL,SPKR 4P DH
MAIN C.B				J403	86-SP2-641-110		TERMINAL,SPKR 4P DH
C104	87-016-539-090		CAP,E 3300-35 SMG	R223	87-A00-258-080		RES,M/F 0.22-1W J
C105	87-016-539-090		CAP,E 3300-35 SMG	R224	87-A00-258-080		RES,M/F 0.22-1W J
C108	87-018-209-010		CAP,TC-U 0.1-50<EZ>	S301	86-SP2-633-010		SW,SL 1-1-2
C109	87-018-209-010		CAP,TC-U 0.1-50<EZ>	S401	86-SP2-633-010		SW,SL 1-1-2
C110	87-018-209-010		CAP,TC-U 0.1-50<EZ>	VR401	87-A91-147-010		VR,RTRY 50KX1 H XVO121PHJN20FS
C111	87-010-197-080		CAP,CHIP 0.01 DM<EZ>	TRANS C.B			
C201	87-010-246-080		CAP, ELECT 47-35V	C101	87-019-112-010		CAP, 0.01 SPARK-KILLER
C202	87-010-246-080		CAP, ELECT 47-35V	C102	87-018-209-080		CAP, CER 0.1-50V
C203	87-010-384-080		CAP, ELECT 100-25V	C103	87-018-209-080		CAP, CER 0.1-50V
C204	87-010-384-080		CAP, ELECT 100-25V	CN101	87-049-469-010		CONN,4P V WHT EH
C205	87-010-384-080		CAP, ELECT 100-25V	CN102	87-099-674-010		CONN,2P VA V
C206	87-010-384-080		CAP, ELECT 100-25V	△ F101	87-035-485-010		FUSE,2A 125V D UL<U>
C207	87-012-156-080		C-CAP,S 220P-50 CH	△ FC101	87-033-213-080		CLAMP, FUSE<U>
C208	87-012-156-080		C-CAP,S 220P-50 CH	△ FC102	87-033-213-080		CLAMP, FUSE<U>
C209	87-010-196-080		CHIP CAPACITOR,0.1-25	△ PR101	87-026-681-080		PROTECTOR 5A 60V 491<EZ,HR>
C210	87-010-196-080		CHIP CAPACITOR,0.1-25	△ PR102	87-026-681-080		PROTECTOR 5A 60V 491<EZ,HR>
C211	87-010-196-080		CHIP CAPACITOR,0.1-25	△ PT101	87-YP4-613-010		200-TSW35EU,PT E<EZ>
C212	87-010-196-080		CHIP CAPACITOR,0.1-25	△ PT101	87-YP4-605-010		200-TSW35UL,PT<U>
C213	87-010-197-080		CAP, CHIP 0.01 DM	△ PT101	87-YP4-612-010		PT,LH<HR>
C214	87-010-406-080		CAP, ELECT 22-50	△ S102	87-A90-234-010		SW,SL 1-2-2 SW2201<HR>
C215	87-010-406-080		CAP, ELECT 22-50	△ T101	82-304-743-010		TERMINAL, 1P
C301	87-010-401-080		CAP, ELECT 1-50V	△ T102	82-304-743-010		TERMINAL, 1P
C304	87-010-544-080		CAP, ELECT 0.1-50V	FRONT C.B			
C305	87-010-383-080		CAP, ELECT 33-25V	D301	82-YP2-617-010		LED,3 GRN STRAIGHT
C306	87-010-405-080		CAP, ELECT 10-50V	S101	87-YP5-626-010		SW,PUSH 1-1-1 SY16-52-3
C307	87-010-544-080		CAP, ELECT 0.1-50V	PHASE SW C.B			
C308	87-010-404-080		CAP, ELECT 4.7-50V	CN201	87-A60-848-010		CONN,4P H BLK TB
C401	87-010-401-080		CAP, ELECT 1-50V	FC201	82-YP2-615-010		F-CABLE,4P 2.5
C402	87-010-385-080		CAP, ELECT 220-25V	S201	87-A91-148-010		SW,SL 2-2-2 SS22J02G12A
C405	87-010-401-080		CAP, ELECT 1-50V				

TRANSISTOR ILLUSTRATION



S D G

2SJ460



E C B

KTA1266GR  
KTC3198GR



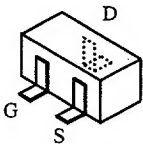
E C B

DTA114ES



B C E

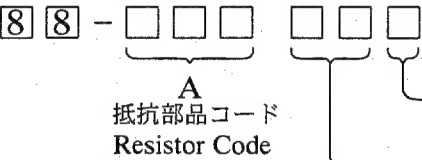
2SD2025  
2SB1344



2SK2158

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち  
Chip Resistor Part Coding



A  
抵抗部品コード  
Resistor Code

桁表示  
Figure  
抵抗値  
Value of resistor

チップ抵抗  
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm)				抵抗コード : A Resistor Code : A
				外形／Form	L	W	t	
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

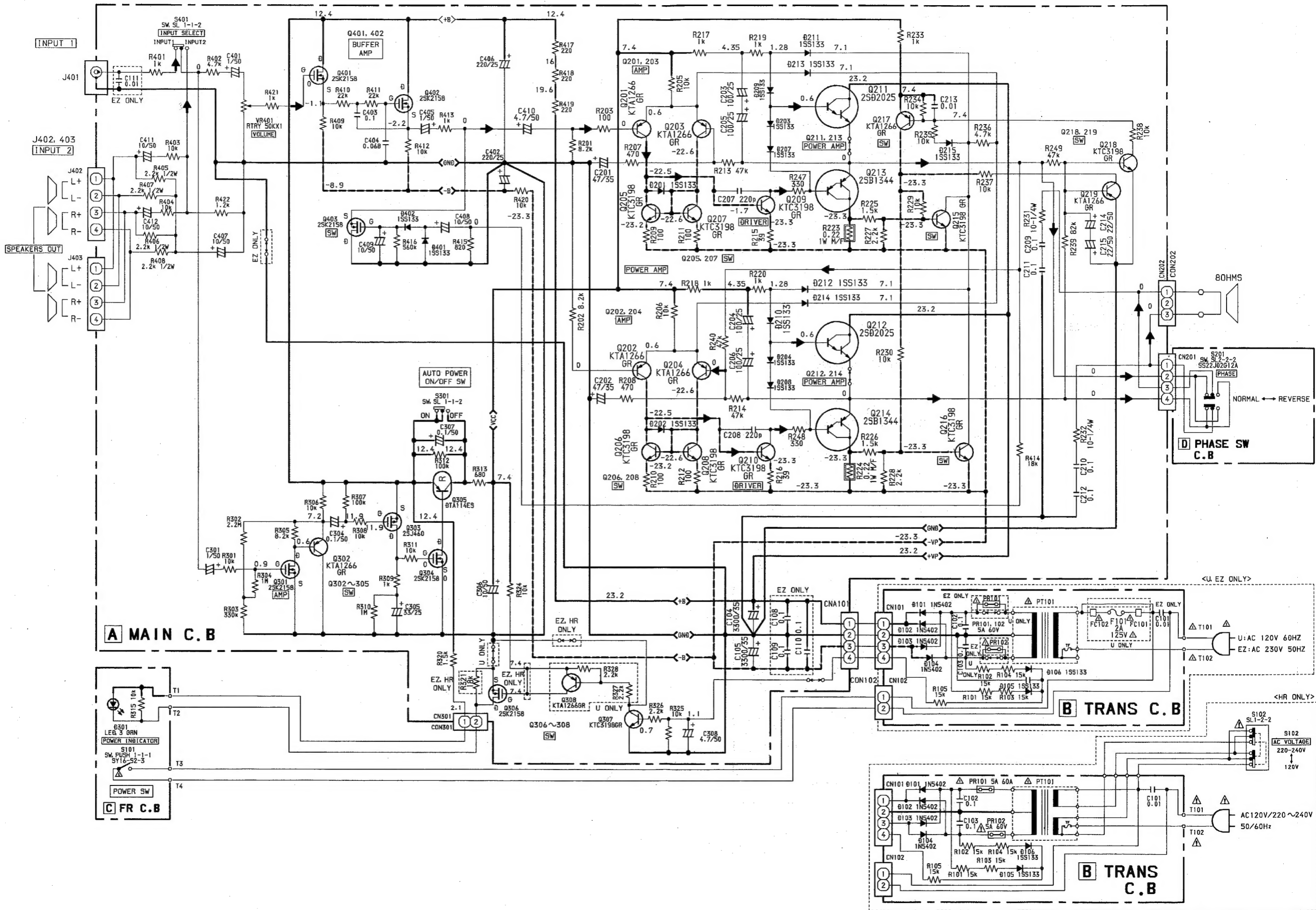
<U MODEL ONLY>



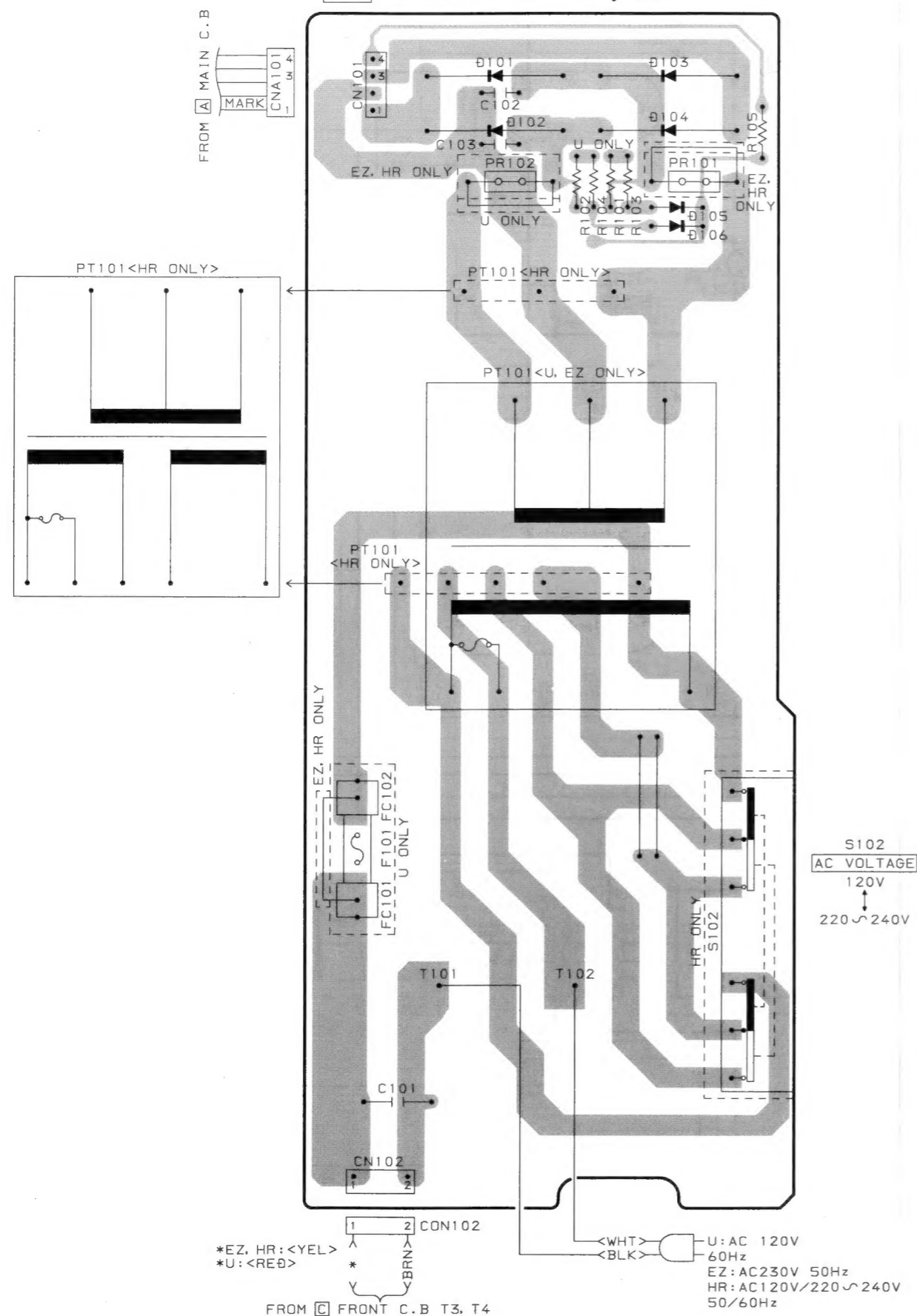
<EZ, HR MODEL ONLY>



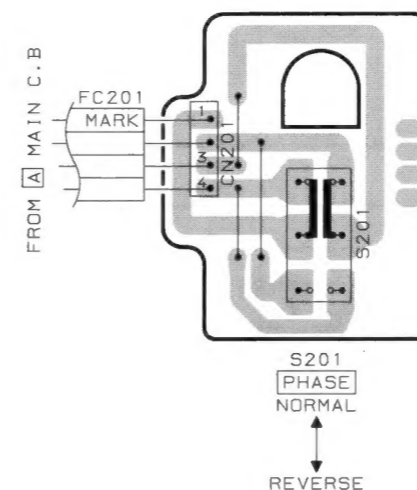
### SCHEMATIC DIAGRAM



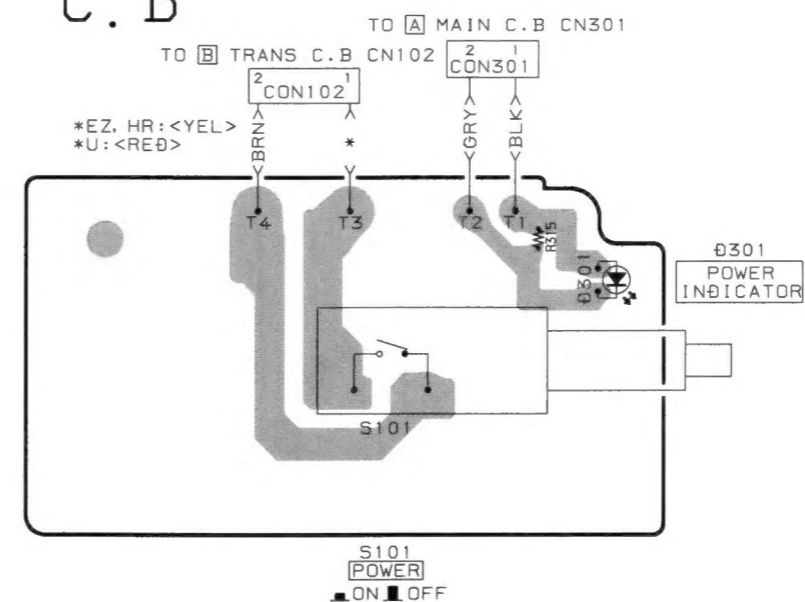
# B TRANS C.B



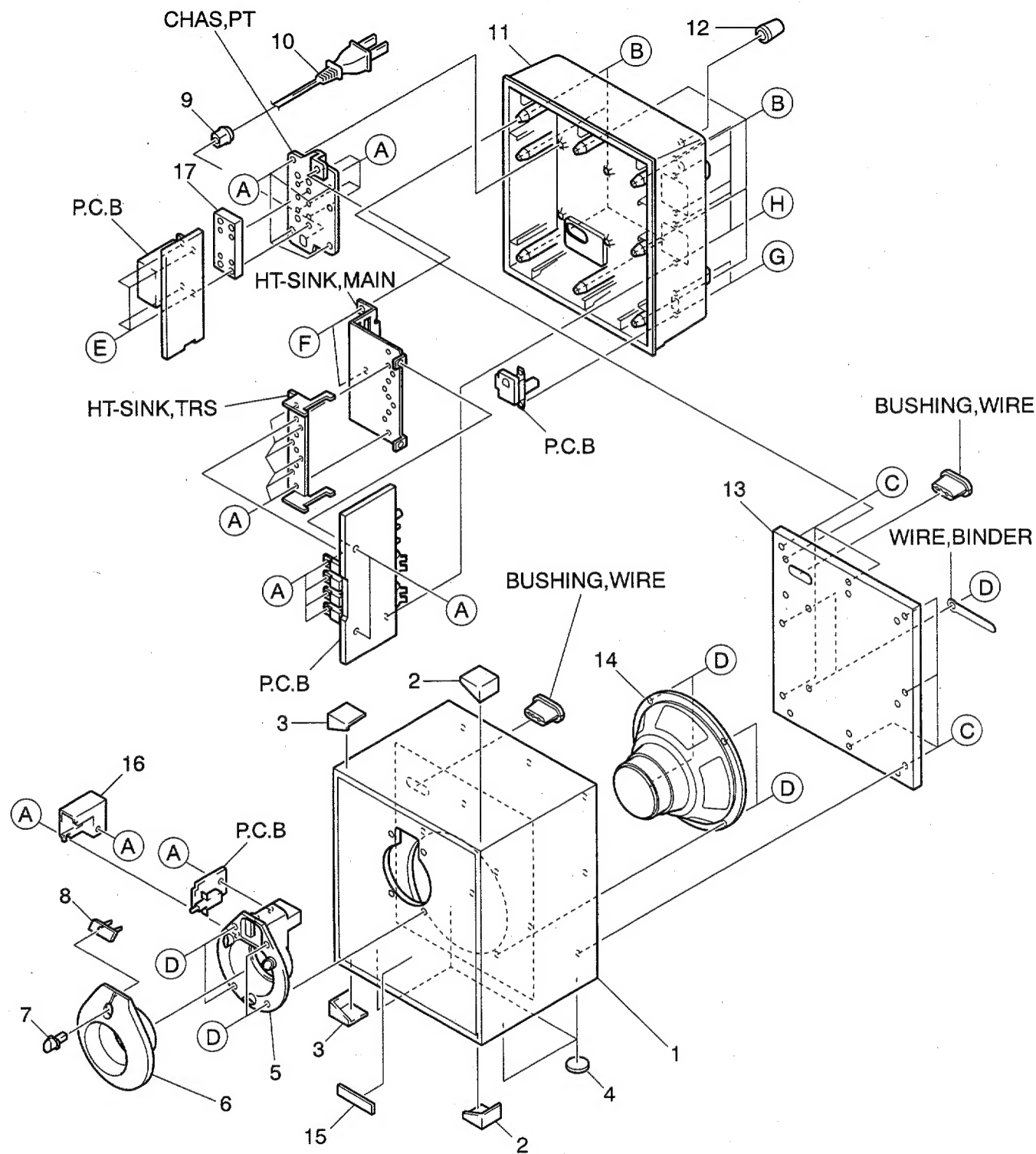
# D PHASE SW C.B



# C FRONT C.B



MECHANICAL EXPLODED VIEW 1 / 1



# MECHANICAL PARTS LIST 1 / 1

If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-YP2-007-010		CABI,WOOD BOX<U,HR>	14	8Z-YP2-610-010		SPKR,200 8OHM
1	8Z-YP2-014-010		CABI,WOOD BOX E1 GRAY<EZ>	15	87-054-087-010		BADGE,AIWA 40
2	87-YP4-012-010		COVER, R	16	8Z-YP2-217-010		COVER,SW UL<U>
3	87-YP4-011-010		COVER, L	16	8Z-YP2-214-010		COVER,SW<EZ,HR>
4	8Z-YP2-205-010		FOOT,BOX	17	87-YP5-225-010		HLDR,TRANS<HR>
5	8Z-YP2-201-010		CASE,SW<EZ,HR>	A	87-067-703-010		TAPPING SCREW, BVT2+3-10
5	8Z-YP2-213-010		CASE,SW UL<U>	B	8Z-YP2-211-010		SW+3.5-18
6	8Z-YP2-002-010		PANEL,DUCT<EZ,HR>	C	87-YP4-211-010		SW+3.5-22
6	8Z-YP2-015-010		PANEL,DUCT UL<U>	D	87-YP4-217-010		BVT1+3.5-12
7	8Z-YP2-004-010		BTN,POWER	E	87-067-566-010		TAPPING SCREW, VFTT+3-6<U>
8	8Z-YP2-005-010		WINDOW,LED	E	87-761-096-410		VFT2+3-10 GLD<EZ,HR>
9	86-SP2-637-010		BUSHING,AC U	F	87-067-689-010		TAPPING SCREW, BVTT+3-8
10	87-YP4-620-010		AC CORD ASSY,U SPT-2W<U>	G	87-741-074-410		UT2+2.6-8
10	86-SP2-634-010		AC CORD,E<EZ,HR>	H	87-755-096-010		VT2+3-10
11	8Z-YP2-006-010		CABI,REAR<EZ>				
11	8Z-YP2-001-010		CABI,REAR HR<HR>				
11	8Z-YP2-009-010		CABI,REAR UL<U>				
12	8Z-YP2-003-010		KNOB,RTRY VOL				
13	8Z-YP2-207-010		PANEL,WOOD<U,HR>				
13	8Z-YP2-212-010		PANEL,WOOD E1<EZ>				

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Sliver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		

# REFERENCE NAME LIST

## ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

## MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL

サービス技術ニュース	
番号	連絡内容
G- -	
G- -	
G- -	

**アイワ株式会社**  
**AIWA CO.,LTD.**

9420208, 931261

Tokyo Japan